



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

12/7/92 RM01/1001
THE PROCTER & GAMBLE COMPANY
PATENT DIVISION
IVORYDALE TECHNICAL CENTER - BOX 474
5209 SPRING GROVE AVENUE
CINCINNATI OH 45217

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/288,734	04/09/99	010	BLACKMAN, A	2072 10/01/99
First Named Applicant	MCQUIRE, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION METHOD OF SEAMING AND EXPANDING AMORPHOUS PATTERNS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3 7492	345-441.000	783	UTILITY	NO	\$1240.00	01/02/00

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.

Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of Allowability

Application No.

09/288,736

Applicant(s)

MCGUIRE et al

Examiner

ANTHONY BLACKMAN

Art Unit

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/9/1999
2. ☒ The allowed claim(s) is/are 1-10
3. ☐ The drawings filed on _____ are acceptable as formal drawings.
4. ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- *Certified copies not received: _____
5. ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE FOR SUBMITTING NEW FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION.** This three-month period for complying with the REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL is extendable under 37 CFR 1.136(a).

6. ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
7. ☒ Applicant MUST submit NEW FORMAL DRAWINGS
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No. _____
- (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the examiner.
- (c) ☐ including changes required by the attached Examiner's Amendment/Comment or in the Office action of Paper No. _____

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

8. ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any reply to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
- 2 ☐ Notice of Informal Patent Application (PTO-152)
- 3 ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 4 ☒ Interview Summary (PTO-413), Paper No. 2-3
- 5 ☒ Information Disclosure Statement(s) (PTO-1449), Paper No(s). 4
- 6 ☐ Examiner's Amendment/Comment
- 7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

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DETAILED ACTION

Reasons For Allowance

1. The following is an examiner's statement of reasons for allowance: none of the following prior art teach or suggest, either singly or in combination, the combination of the limitations of the independent Claim 1.

The prior art includes; SHIRMAN et al US Patent no. 5,550,960; PIEGEL et al US Patent No. 5,428,726; ENSZ et al US Patent No. 6,100,893; AKIYAMA US Patent No. 5,794,764; KOEBERGER US Patent No. 5,740,342; FARMER US Patent No. 6,106,561; MCGUIRE et al US Patent No. 5,965,235; MCGUIRE et al US Patent No. 6,148,496, MCGUIRE et al US Patent No. 6,245,965, and any of the IDS patents and articles. The instant application discloses computer-generated interlocking networks of irregularly shaped, tiled polygons derived from the combination of a Delaunay triangulation and constrained Voronoi tessellation process. MCGUIRE et al is the inventor. Patents cited by MCGUIRE, '235, '965, and '496 disclose the general nature of the instant application: "The amorphous pattern of interlocking shapes is preferably derived from a constrained Voronoi tessellation of 2-space... wherein the tessellation is constrained by a constraint factor which controls the range of permissible center-to-center spacing of the interlocking shapes (see '295, abstract, lines 25-30)." PIEGEL et al disclose the mean of a triangulated irregular network which generate digital terrain modeling, as well as mathematical calculations such as fluid flow and heat transfer, and data visualization and

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rendering. The origins of triangulating data points go back to Delaunay and Voronoi, and a number of text books and papers have extensively covered their properties and algorithms for their constructions (see column 1, lines 10-22). ENSZ et al disclose the process of Delaunay triangulation through computer constructing geometric models of shapes, and more specifically,, to producing representations of surfaces and solids corresponding to a collection of data points (see column 1, lines 15-20). The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. However, none of the prior art cited by the applicant or examiner, either singly or in any combination disclose the following recited limitations of claim 1; "A method of creating an amorphous two-dimensional pattern of interlocking two-dimensional geometrical shapes having at least two opposing edges which can be tiled together, said method comprising the steps of: (a) specifying the width X_{max} of said pattern measured in direction X between said opposing edges; and (b) adding a computational border region of width B to said pattern along one of said edges located at the X distance; computational generating (X,Y) coordinates of a nucleation point having X coordinates between 0 and X_{max} ; and (d) selecting nucleation points having X coordinates between 0 and B and copying them into said computational border region by adding X_{max} to their X coordinate value...".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SHIRMAN et al US Patent No. 5,550,960; PIEGEL et al US Patent No. 5,428,726; ENSZ et al US Patent No. 6,100,893; AKIYAMA US Patent No. 5,794,764; KOEBERGER US Patent No. 5,740,342; FARMER US Patent No. 6,106,561; MCGUIRE et al US Patent No. 5,965,235; MCGUIRE et al US Patent No. 6,245,965, and MCGUIRE et al 6,148,496.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Blackman whose telephone number is (703) 305-0833. The examiner can normally be reached on Monday through Thursday from 8 a.m. to 4 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi, can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry) Or:

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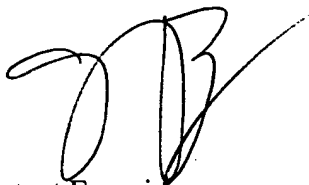
(703) 746-5731 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park 11, 2121 Crystal Drive, Arlington.

VA.,

Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to be 'AJB' with a checkmark-like flourish at the end.

Patent Examiner

Anthony J. Blackman

9/28/2001